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**REMARKS**

Claims 30-41 have been withdrawn in view of the restriction requirement. Claims 3, 10, 10, 14 and 17 have been amended. No new claims have been added.

**Objection to the Claims**

Claim 3 has been amended by adding the period at the end of the sentence.

**Claim Rejections Under 35 USC §112, second paragraph**

Claims 10 and 13 have been cancelled. Claim 14 on page 28 has been corrected. In view of these amendments it is now deemed that all the claim in this case satisfy 35 USC §112, second paragraph. Withdrawal of the rejection is respectfully requested.

**Claim Rejections Under 35 USC §103**

Claims 1-9, 11, 12 and 15-29 have been rejected under §103 as being unpatentable over US 6,084,041 ("Andtsjo") in view of US 6,124,231 ("Fritze"). This rejection is respectfully traversed.

The undersigned respectfully asks the Examiner what would motivate a person of ordinary skill in the art to turn to Fritze, view the thousands of compounds in Fritze, then from those thousands of compounds listed therein select the particular compounds which Applicants recite in the instant claims, and then combine that with the disclosure of Andtsjo?

Should the ordinary practitioner by happenchance select the compounds in Applicants' claims and then making such a combination, it is deemed one of ordinary practitioner in the art would not anticipate (predict) or expect the unexpected results which are disclosed in the instant application. The unexpected results presented clearly in Applicants' specification are respectfully deemed to overcome any alleged prima facie case of obviousness raised by the Examiner. Applicants have disclosed a 10 fold increase in catalyst rate over similar catalyst compounds which are solely substituted at the

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number 2 position. It is respectfully submitted that this 10 fold increase in catalytic rate is a clear demonstration of unexpected results for Applicants' compounds substituted in the 2 and 4 position. Thus, Applicants' disclosure is deemed to overcome any alleged suggestion of prima facie obviousness. It is respectfully submitted that Applicants' discovered unexpected benefit is neither suggested nor disclosed in the teachings of Andtsjo, Fritze, or the combination of the two references.

Andtsjo is directed toward the use of a metallocene compound having indenyl groups substituted at the 2 position. There is simply no suggestion in Andtsjo that substitution in the 2 and 4 position is an option. Andtsjo merely discloses that "[a]s catalyst also metallocene-type catalysts can be used. ...these catalysts typically comprise as a procatalyst component a metallocene compound, for example bis(cyclopentadienyl)titanium dialkyl or bis(cyclopentadienyl)zirconium alkonyl [sic] or chlorides thereof, and an activator component, which typically is alumoxane or an ionic activator" (Col. 5, lines 45-54.) Andtsjo fails to disclose or suggest Applicants' recited metallocene catalyst compounds. Furthermore, Applicants clearly demonstrate the improvement of the presently claimed invention over that wherein the bis indenyl metallocene catalyst compounds are substituted at the number 2 position, but not at both the number 2 and the number 4 position. In particular, Applicants disclose in Table 1 that the catalyst activity of the inventive catalyst compounds is ten times that of catalysts which are substituted at the 2 position, but unsubstituted at the 4 position (see Table 1, and numbered paragraphs [00162]-[00164] of the application as filed.)

Accordingly, it is respectfully submitted that Andtsjo fails to disclose or suggest the catalyst compound recited by Applicants. Furthermore, Applicants have shown an unexpected benefit is achieved using the recited process as compared to the disclosure of Andtsjo. As such, Andtsjo cannot reasonably be said to render Applicants' presently claimed invention obvious.

The Examiner suggests that because Andtsjo might suggest that a broad array of metallocenes is useful that the ordinary practitioner would be able to turn to any other disclosure in the broad art and select the particular catalysts which would provide for a 10

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fold increase in catalytic rate. It is respectfully submitted that the Examiner in focusing on Andtsjo's use of the words, "broad array" attempts to eliminate any possibility of inventive aspects of catalysts not disclosed in Andtsjo. The Examiner further suggests that that the ordinary practitioner is not operating in the dark and hence would select analogous species. But, it is respectfully noted that analogous species lead to a patentable invention where unexpected results are unequivocally demonstrated. The Examiner further suggests that there is no reason to believe that the use of similar metallocenes would meet with failure in the process of Andtsjo. The undersigned respectfully submits it is not a question of failure but a question of unexpected results. It is submitted that the ordinary practitioner would not predict the unexpected results demonstrated in the above-identified application. The Examiner also suggest there is exceedingly high skill at the practitioner in this art. Nevertheless the Examiner has failed to present evidence of how this highly skilled artisan would select the particular catalysts recited in Applicants' claims from the huge disclosure of Fritze and with that high skill know that if applied to Andtsjo would obtain the 10 fold increase in rate. Even if Applicant were to agree, for the sake of argument, that the selection process would lead to catalysts that work successfully in Andtsjo, Applicant does not agree that the catalyst would automatically manifest a 10 fold increase in catalytic rate.

Such a broad statements by the Examiner are in contradiction to the well established precept that catalysis is an unpredictable art, a precept that is exemplified by Applicants' unexpected improvement disclosed in Table 1. Such a broad statements do not suggest the limited process recited by Applicants, wherein the metallocene catalyst compound has at least two indenyl rings or derivative of indenyl rings, wherein each ring is substituted at the 2 and 4 positions. Nor do the broad statements suggest any particular benefit of using Applicants' highly limited catalyst compound under the recited supercritical conditions.

It is respectfully submitted that the Examiner's rejection is based on impermissible hindsight, wherein Applicants' presently claimed invention was used as a

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roadmap to select the various limitations from the thousands of choices disclosed in the prior art.

Even absent hindsight, Applicants' presently claimed invention, as amended, is not rendered obvious by Andtsjo, Fritze, or a combination thereof. It is well settled that even if the process were prima facie obvious merely from a consideration of reactants, media and steps employed, the invention as a whole can nevertheless be unobvious within the meaning of 35 USC §103 by reason of an unsuggested increase in yield employing less reactant, *In re Van Schickh* (CCPA 1966) 362 F.2d 821, 150 USPQ 300. Furthermore, claims to a process involving a combination of reactants and reaction conditions within the broad teaching of the prior art are patentable where the combination produces an unexpected result rather than the optimum of that taught by the prior art. *Ex parte Hoff et al.* (POBA 1959) 127 USPQ 281; *In re Sebek* (CCPA 1972) 465 F.2d 904, 175 USPQ 93. Applicant's allegations of unexpected results cannot be ignored merely because the claimed process is within the broad teachings of the prior art. *In re Cosfello* (CCPA 1973) 480 F.2d 894, 178 USPQ 290. See also, comparative data in examples in the specification showing an unobvious result (*In re Margolis* (CAFC 1986) 785 F.2d 1029, 228 USPQ 940.)

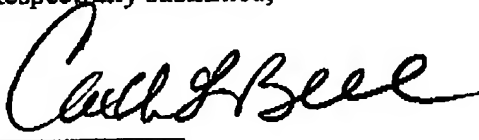
Furthermore, even though Applicants' disclosed reactivity, as well as the ability to produce a propylene polymer where the polymer has a heat of fusion of 70 J/g and has a  $g'_{avg}$  of 0.98 or less are not recited in the claims, it has been held that the unexpected result upon which patentability is based need not always be recited in the claims, at least when the feature responsible therefor is. *In re Merchant* (CCPA 1978) 575 F.2d 865, 197 USPQ 785.

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In view of the above amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Prompt notice of allowance is respectfully solicited.

Respectfully submitted,

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